# AGC-4 Mk II

4189341268C

## Operator's manual

Improve Tomorrow

# 1. General information

## 1.1 About the Operator's manual

This AGC-4 Mk II Operator's Manual describes the DU-2 display unit buttons and LEDs, LCD display, alarm handling and the log list.

A TDU 107 can be used instead of a DU-2. This touch screen display unit has its own operator's manual.

**CAUTION**
Read this document before starting to work with the controller. Failure to do this could result in human injury or damage to the equipment.

| | |
|---|---|
| AGC-4 Mk II | SW version 6.00 |

## 1.2 Warnings, safety and legal information

### 1.2.1 Warnings and notes

Throughout this document, a number of warnings and notes with helpful user information will be presented. To ensure that these are noticed, they will be highlighted as follows in order to separate them from the general text.

**Warnings**

**DANGER!**
This highlights dangerous situations. If the guidelines are not followed, these situations could result in death, serious personal injury, and equipment damage or destruction.

**CAUTION**
This highlights potentially dangerous situations. If the guidelines are not followed, these situations could result in personal injury or damaged equipment.

**Notes**

**INFO**
Notes provide general information, which will be helpful for the reader to bear in mind.

### 1.2.2 Factory settings

The controller is delivered pre-programmed from the factory with a set of default settings. These settings are based on typical values and may not be correct for your system. You must therefore check all parameters before using the controller.

### 1.2.3 Legal information and disclaimer

DEIF takes no responsibility for installation or operation of the generator set or switchgear. If there is any doubt about how to install or operate the engine/generator or switchgear controlled by the Multi-line 2 unit, the company responsible for the installation or the operation of the equipment must be contacted.

**NOTE** The Multi-line 2 unit is not to be opened by unauthorised personnel. If opened anyway, the warranty will be lost.

**Disclaimer**

DEIF A/S reserves the right to change any of the contents of this document without prior notice.

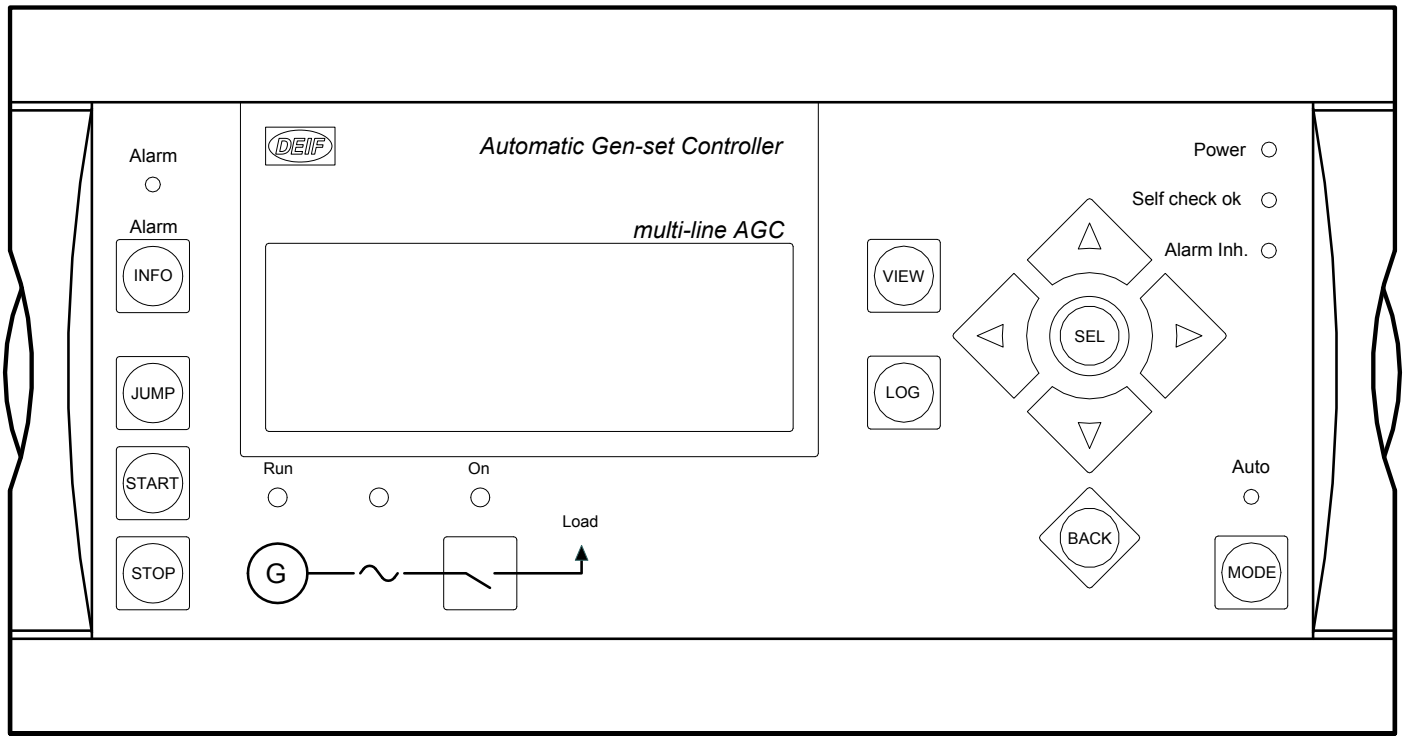
The English version of this document always contains the most recent and up-to-date information about the product. DEIF does not take responsibility for the accuracy of translations, and translations might not be updated at the same time as the English document. If there is a discrepancy, the English version prevails.

# 2. DU-2 buttons and LEDs

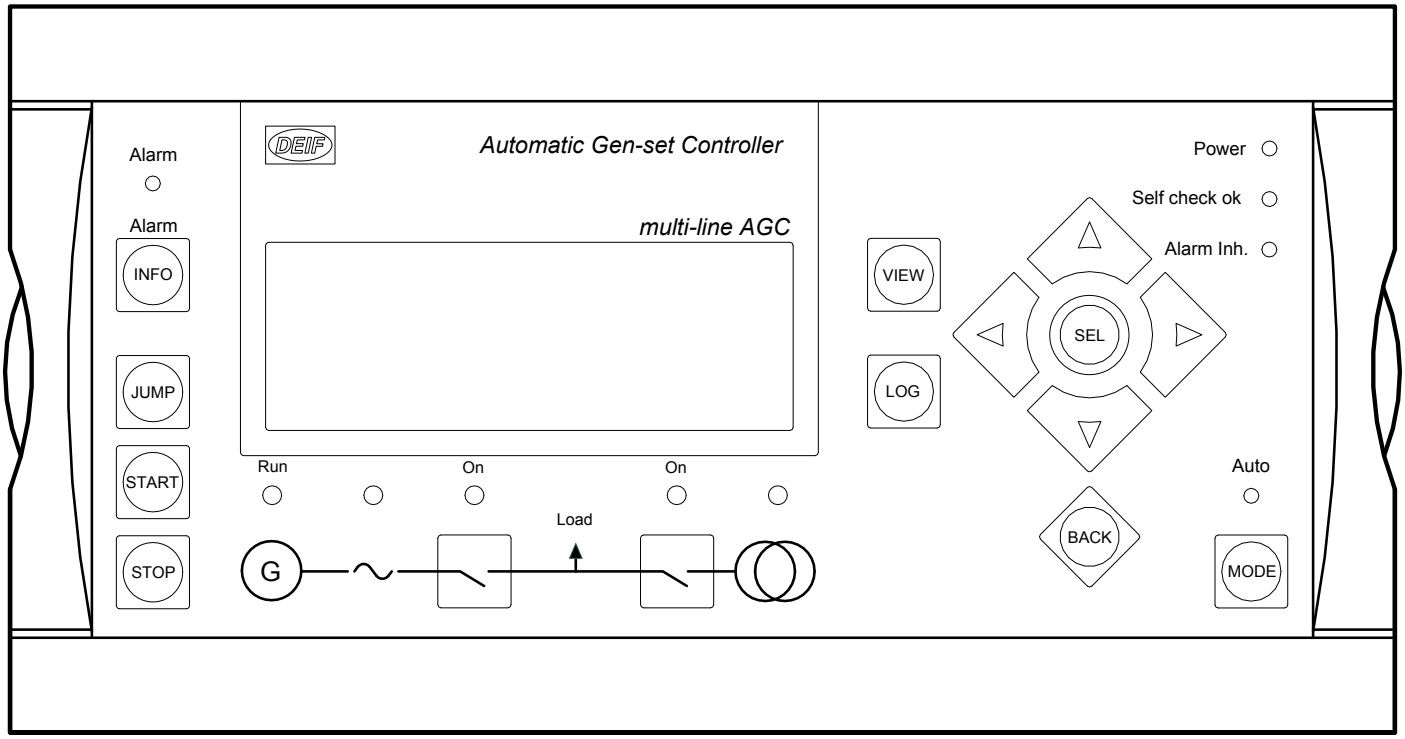
## 2.1 Display layouts for AGC-4 Mk II

**INFO**
The display dimensions are H × W = 115 × 220 mm (4.528" × 8.661").

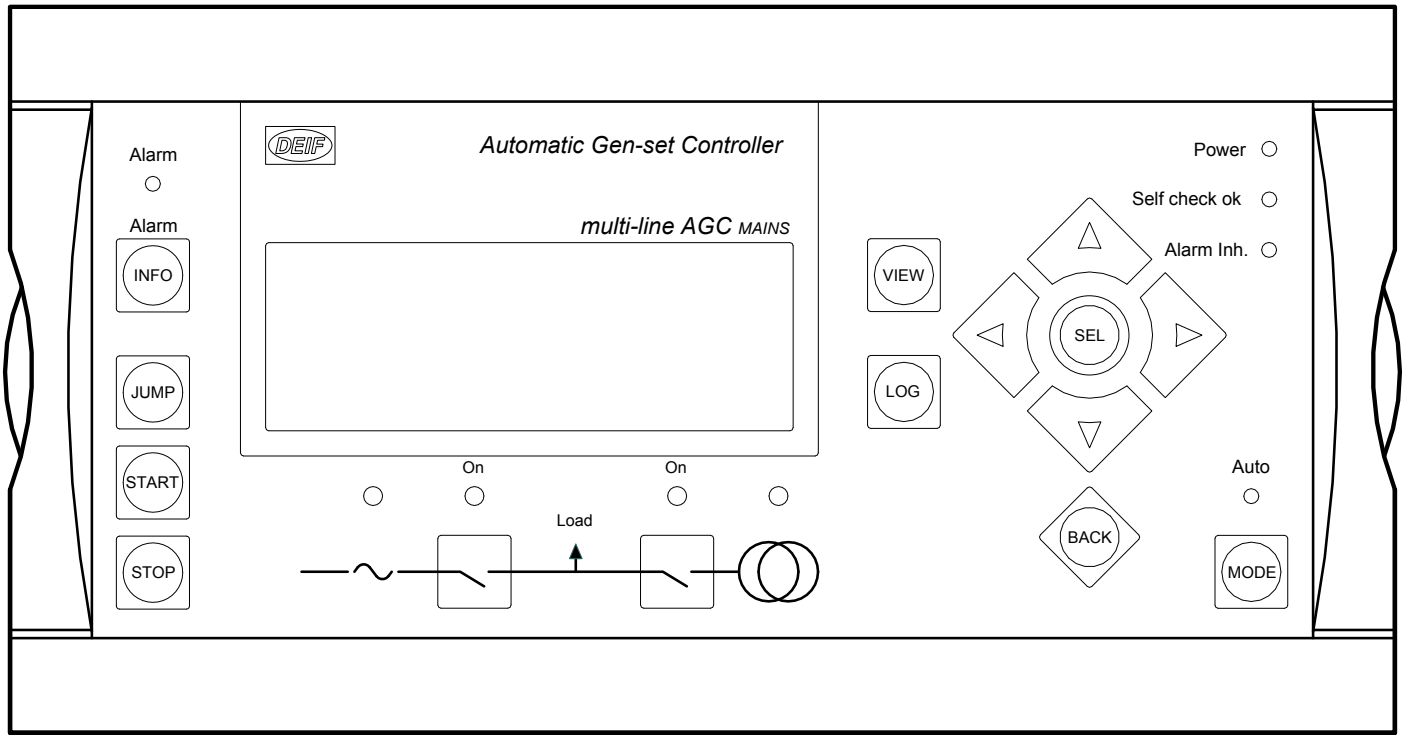
**Engine and generator breaker control (island) (option Y1)**



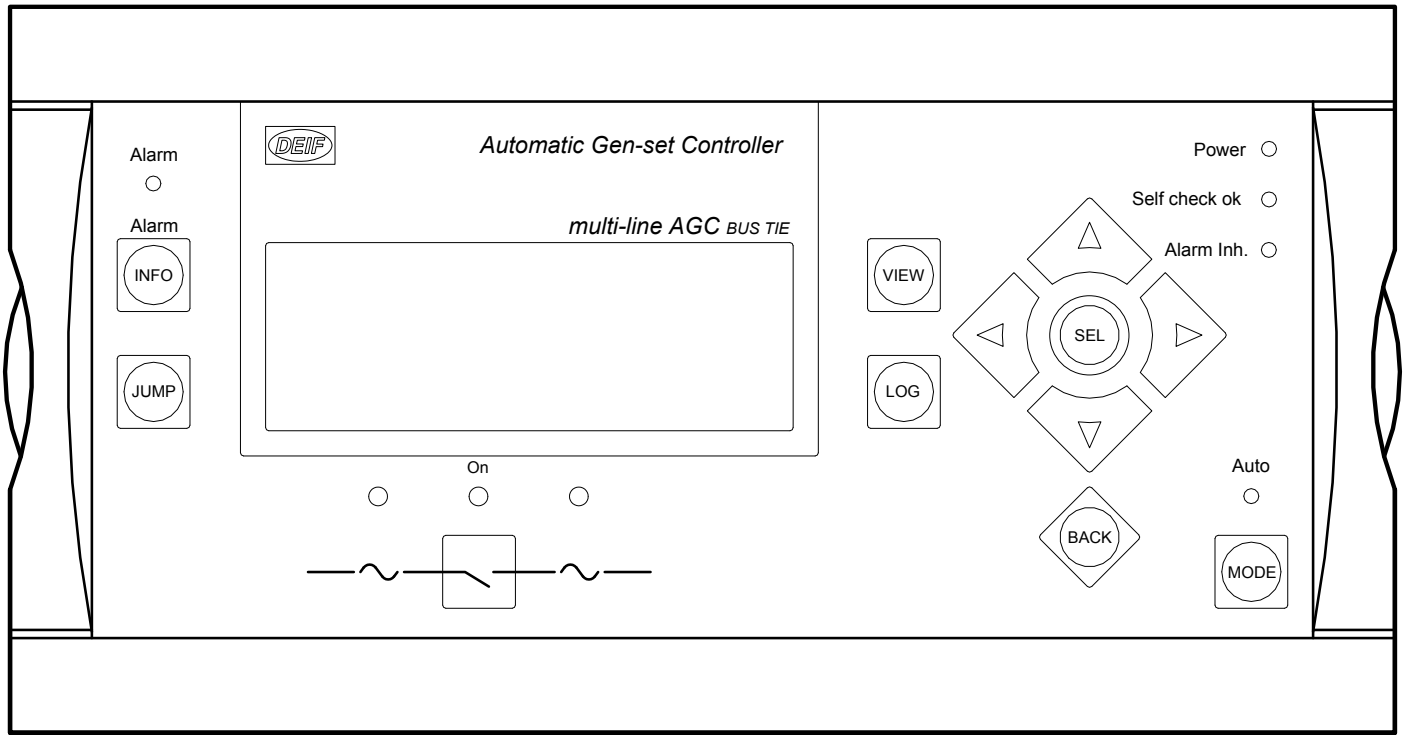

**Generator breaker and mains breaker control (option Y3)**



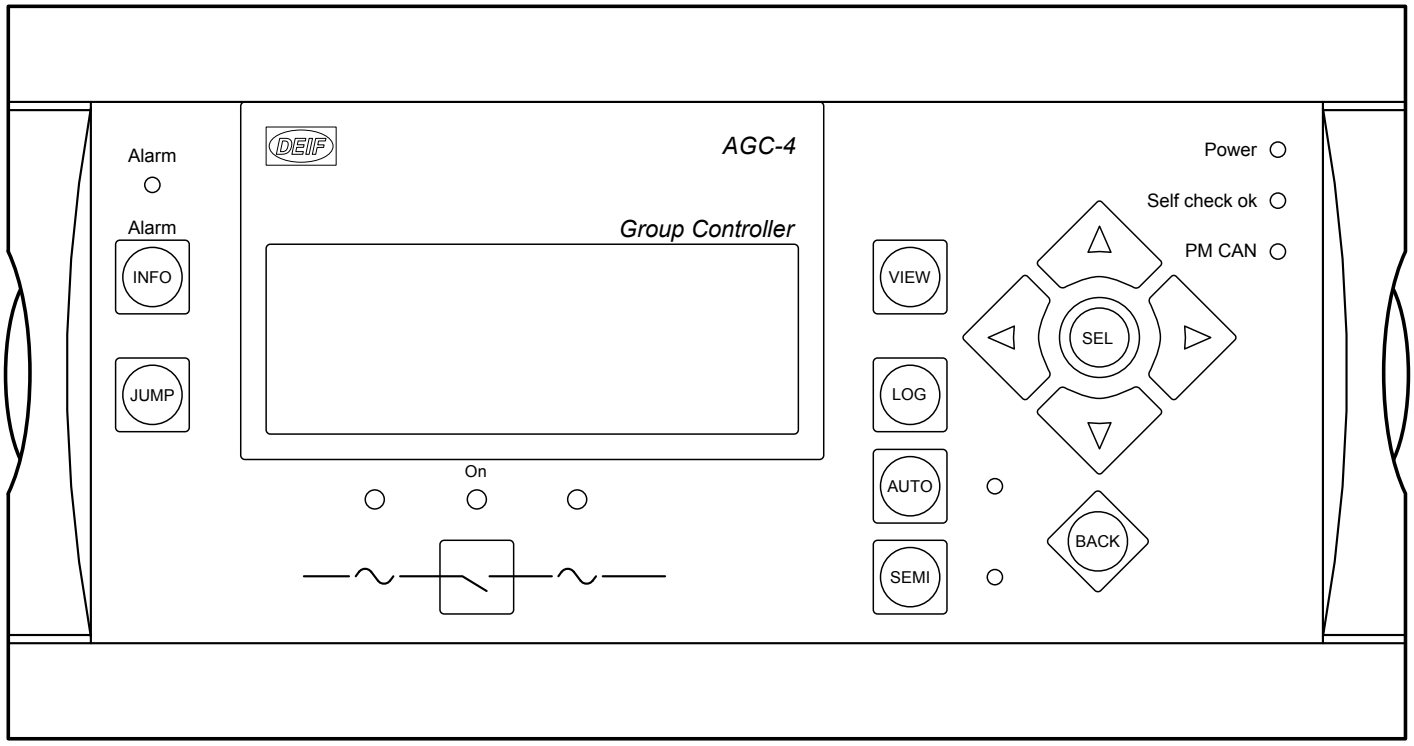
**Tie breaker and mains breaker control (option Y4)**



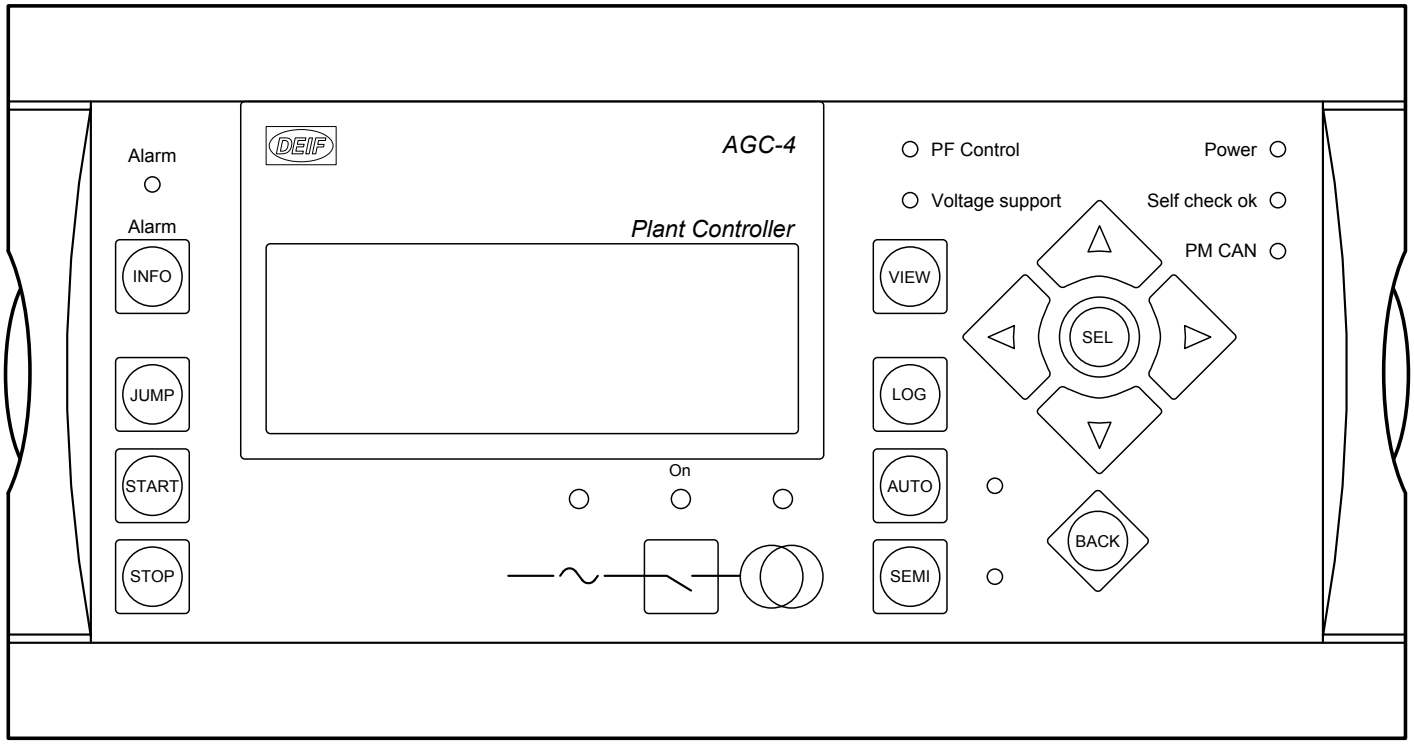

**Bus tie breaker control (option Y5)**



## Group control (option Y8)

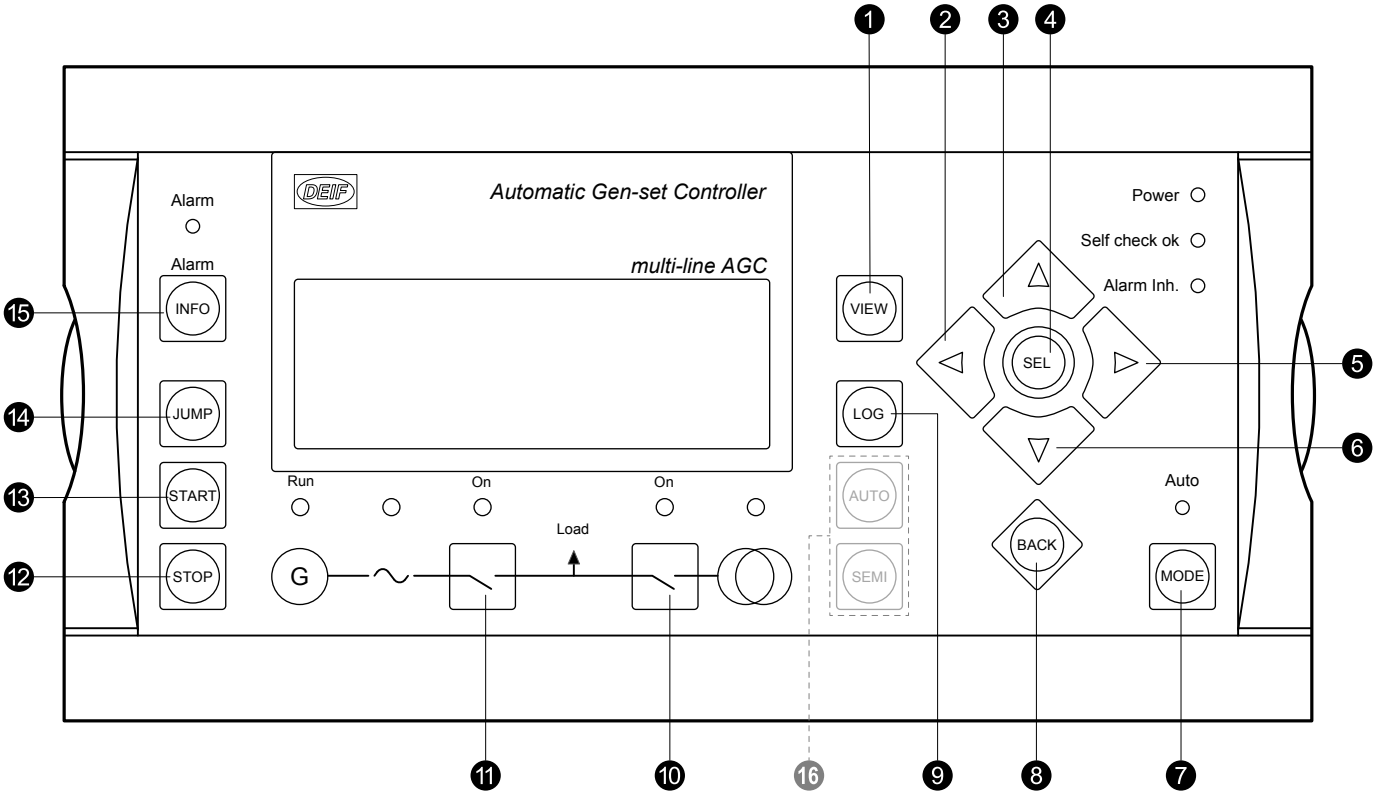



## Plant control (option Y9)

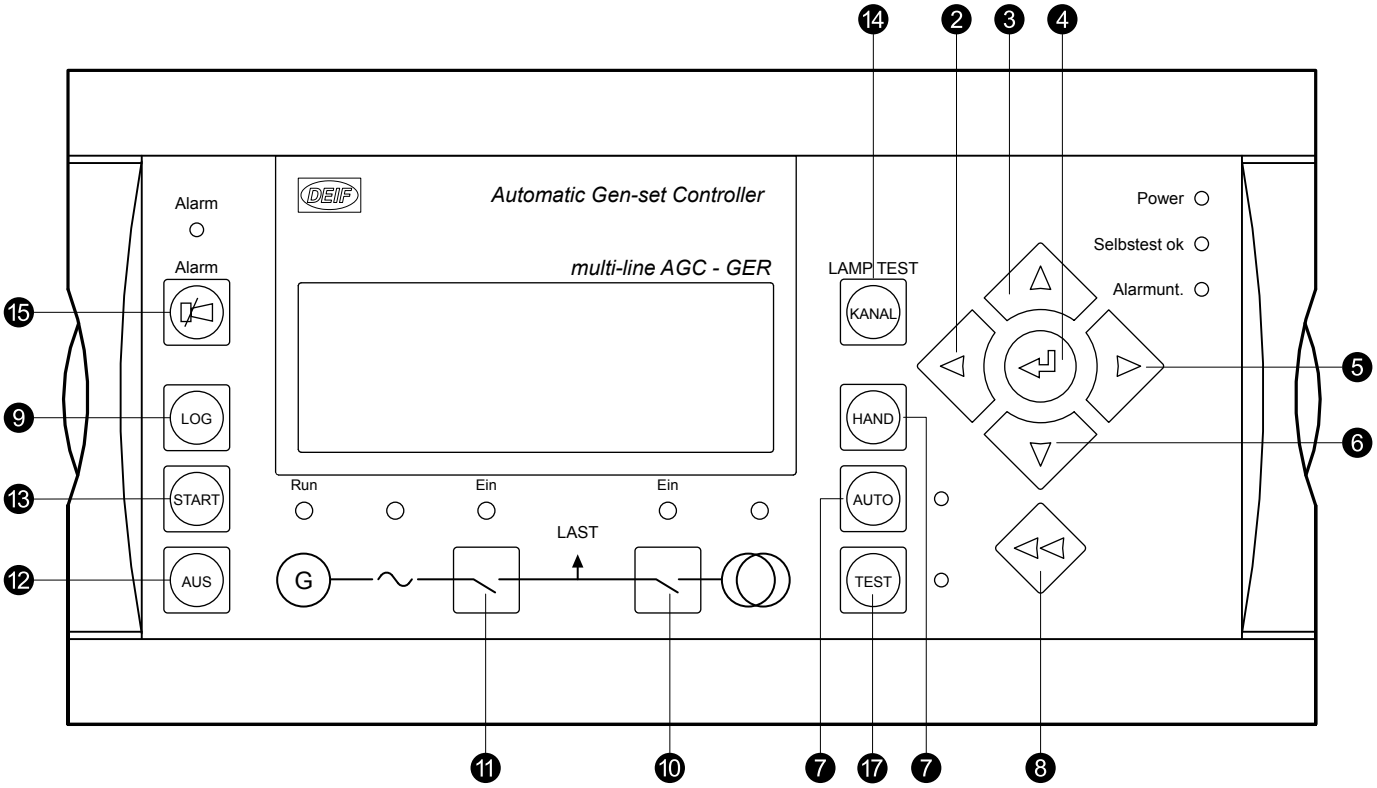


## 2.2 Button functions

**Standard AGC-4 Mk II folio**




**AGC - GER (German) folio**




1. Shifts the first line displaying in the setup menus. If more than one DU-2 is connected to the controller, push for 2 seconds to make this DU-2 the master display.
2. Moves the cursor left.
3. Up button: Function depends on context.
   - V1: Scrolls the view lines.

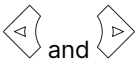
- Setup menu: Displays a different value in the second line.
- A parameter: Increases the set point.

4. Selects the underscored entry in the fourth line of the display.
5. Moves the cursor right.
6. Down button: Function depends on context.
   - V1: Scrolls the view lines.
   - Setup menu: Displays a different value in the second line.
   - A parameter: Decreases the set point.
7. Changes the menu line (line four) in the display to mode selection.
   - Not present in group and plant controllers.
8. Jumps one step backwards in the menu (to previous display or to the entry window).
9. Displays the LOG SETUP window where you can choose between the Event, Alarm and Battery logs. The logs are not deleted when the auxiliary supply is switched off.
10. Manual activation of close/open breaker sequence if SEMI is selected.
11. Manual activation of close/open breaker sequence if SEMI is selected.
12. Stops the genset/plant if SEMI or MANUAL* is selected.
13. Starts the genset/plant if SEMI or MANUAL* is selected.
14. Enables the user to use the menu number to select and display any setting.
15. Shifts the display three lower lines to show the alarm list. By holding the button, all alarms will be acknowledged.
16. Group and plant controllers: Select AUTO and SEMI mode.
17. German AGC only: Test button.

*Note: MANUAL mode is not available in German controllers.

## 2.3 Modes

If the MODE button is pushed, a selection of possible running modes appears in the fourth display line.

Using the  buttons moves the cursor, and the appropriate mode can be selected by pressing the SEL button:

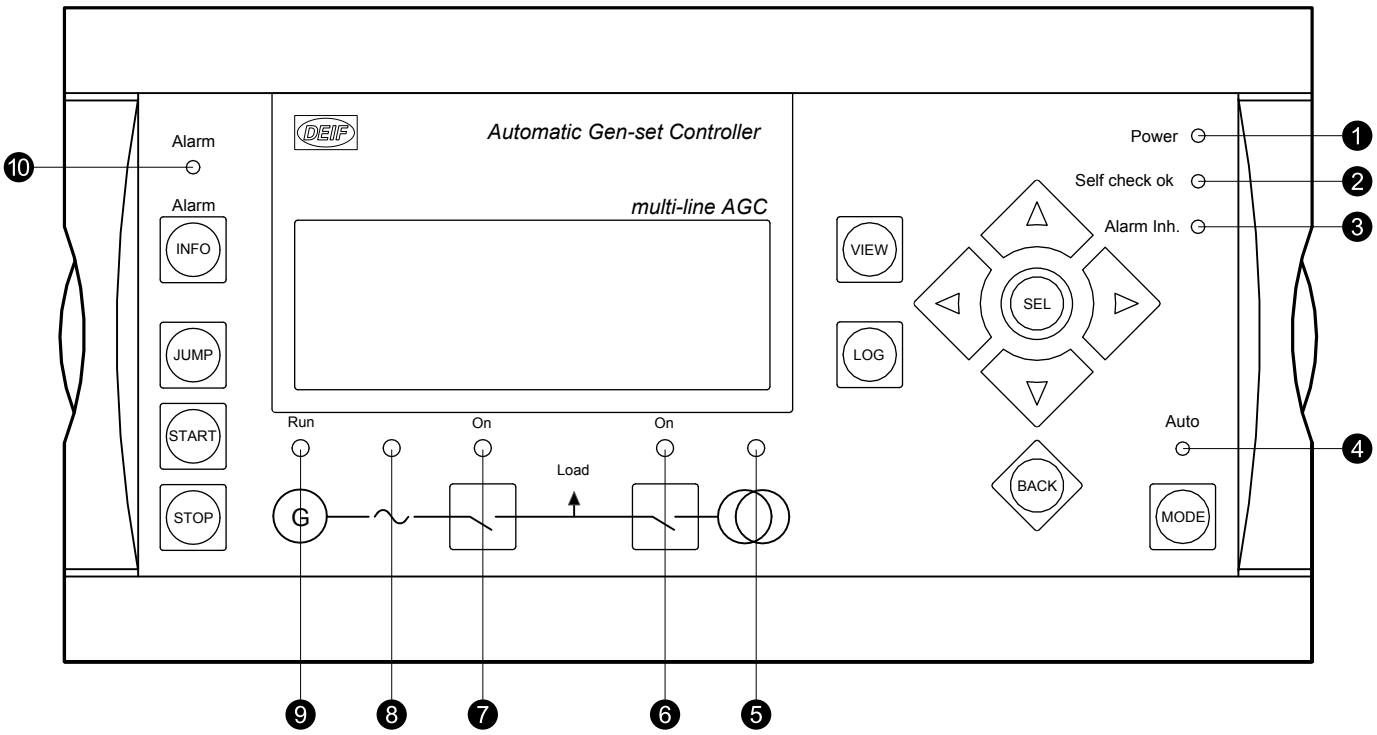
| Mode | Description |
|---|---|
| SEMI | • The display buttons (START, STOP, GB ON, GB OFF) are active and can be used by the operator.<br>• The regulators are also active, that is, the speed control will bring the generator to nominal speed upon start.<br>• When pushing a breaker button for closing, the AGC will synchronise (if allowed) the breaker. When the breaker closes, the controls stop. |
| TEST | • The controller will start the generator, carry out the test sequence (pre-defined time period) and stop the generator again. Subsequently, the generator will return to AUTO or SEMI-AUTO mode. The mains breaker will remain closed, and the generator breaker will remain open. NOTE: The test running can be: Simple test: starting the genset without closing the GB; Load test: parallel to the mains and take load to a pre-defined value; Full test: transfer the load to the genset and open the MB. |
| AUTO | • The controller will automatically carry out the control type selected (AMF, fixed power, and so on).<br>• The display control buttons (START, STOP, GB ON, GB OFF) are disabled.<br>• Mains controller in local (parameter 8021): If the selected running mode is fixed power, mains power export, load takeover or island, timer start/stop (week watch) or binary input, then start/stop can be used. |
| MAN* | • The display buttons (START, STOP) are active and can be used by the operator.<br>• The regulators are not active, that is, speed (and voltage) control has to take place using binary inputs for UP and DOWN control.<br>• The breakers will be able to open or close at any time. A synchronisation check will always be performed to ensure safe closing of the breakers. |
| BLOCK | • The controller will not be able to start the equipment. BLOCK mode can be selected during standstill and the password is needed to exit BLOCK mode. If BLOCK mode is selected while the genset is running, the mode will have no effect until the genset is stopped. To select another mode after BLOCK mode, the password must be entered. |

*Note: Manual mode is not available on the German controller.

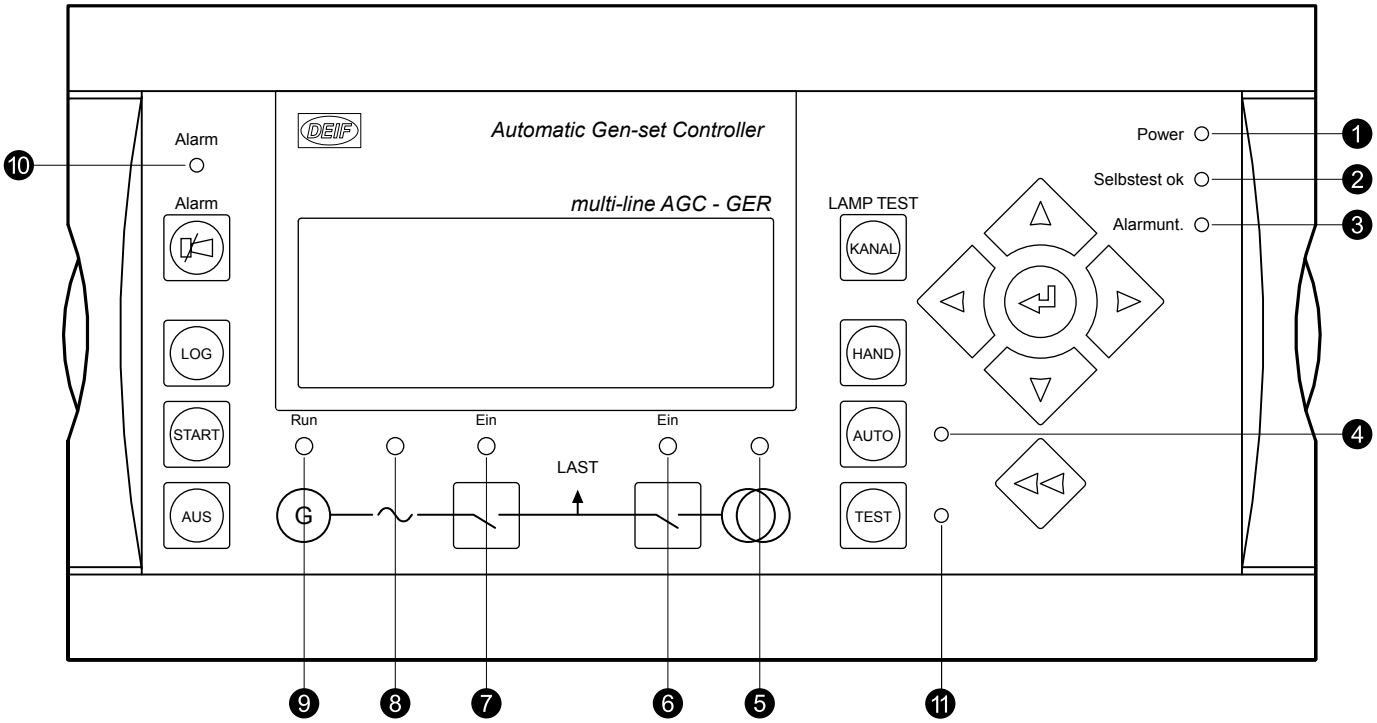
To return to the other display functions from MODE selection, press the BACK button.

## 2.4 LED functions

**Standard AGC-4 Mk II folio**




**AGC - GER (German) folio**




1. LED indicates that the auxiliary supply is switched on.
2. LED indicates that the controller is OK.
3. See *Alarm inhibit* in the **Designer's reference handbook**.
   - In group and plant controllers, this is the power management CAN bus communication status.
4. LED indicates that auto mode is selected.
   - In group and plant controllers, this is replaced by the status LEDs next to the AUTO and SEMI buttons.
5. LED is green if the mains is present and OK. LED is red for a measured mains failure. LED is flashing green when the mains returns during the "mains OK delay" time.

6. LED green light indicates that the mains breaker is closed. LED is flashing yellow if the "MB spring loaded" signal from the breaker is missing or the MB load time has not expired.
7. LED green light indicates that the generator breaker is closed. LED yellow light indicates that the generator breaker has received a command to close on a black bus, but the breaker is not yet closed due to interlocking of the GB. LED is flashing yellow if the "enable GB black close" or the "GB spring loaded" signal is missing or the GB load time has not expired.
8. LED green light indicates that the voltage/frequency is present and OK.
9. LED indicates that the generator is running.
10. LED flashing indicates that unacknowledged alarms are present. LED fixed light indicates that ALL alarms are acknowledged, but some are still present.
11. German AGC only: TEST LED.

### 2.4.1 LED colour schemes

There are two colour schemes for the display LEDs. If LED colour scheme 2 is required, use parameter 6082 (DU-2 only) to select it.

| Breaker or bus status | Colour scheme 1 (default) | Colour scheme 2 |
|---|---|---|
| Breaker closed | Green | Red |
| Breaker open | White/no color | Green |
| Mains fail 0-30% | Red | Green |
| Mains above 30% but not inside “Hz/V OK” window. | Red | Red |
| Mains inside “Hz/V OK” window | Green | Red |
| Busbar fail 0-30% | No color | Green |
| Busbar above 30% but not side “Hz/V OK” window | Red | Red |
| Busbar inside “Hz/V OK” window | Green | Red |
| DG fail 0-30% | No color | Green |
| DG above 30% but not inside “Hz/V OK” window | Red | Red |
| DG inside “Hz/V OK” window | Green | Red |

# 3. LCD display and menus

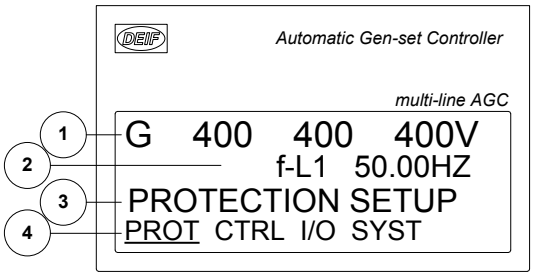
## 3.1 LCD display

The display is a backlit LCD text display. It has four lines with 20 characters in each line. Use parameter 9150 to increase or decrease the brightness.

## 3.2 Menus

The display includes two menu systems.

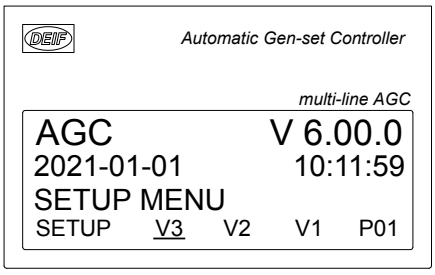
- Setup
  - The operator can see the controller's parameters.
  - Changes to the parameter configuration require a password.
- View
  - The operator can see the operating status and values.




| Display line | Use | Description |
|---|---|---|
| 1 | Daily use | Status or operating values. |
| 2 | Daily use | Operating values. |
| | Setup menu | Information for the parameter number. |
| | Alarm/log | The latest alarm/event. |
| 3 | Daily use | Details for the line 4 cursor selection. |
| | Setup menu | The selected setting. When changes are made, the minimum and maximum values. |
| 4 | Daily use | Select setup or view 1, 2 or 3. Press SEL to enter. |
| | Setup menu | Sub-functions for the parameter, for example, limit. |

### 3.2.1 Entry window

When the controller is powered up, the window shown below appears.




This window is the gateway to the other menus. View V3 can always be reached by pushing the BACK button three times.

For Genset and Group controllers, the priority is shown in the lower right corner of the display. You can use the PC utility software to change the priority.

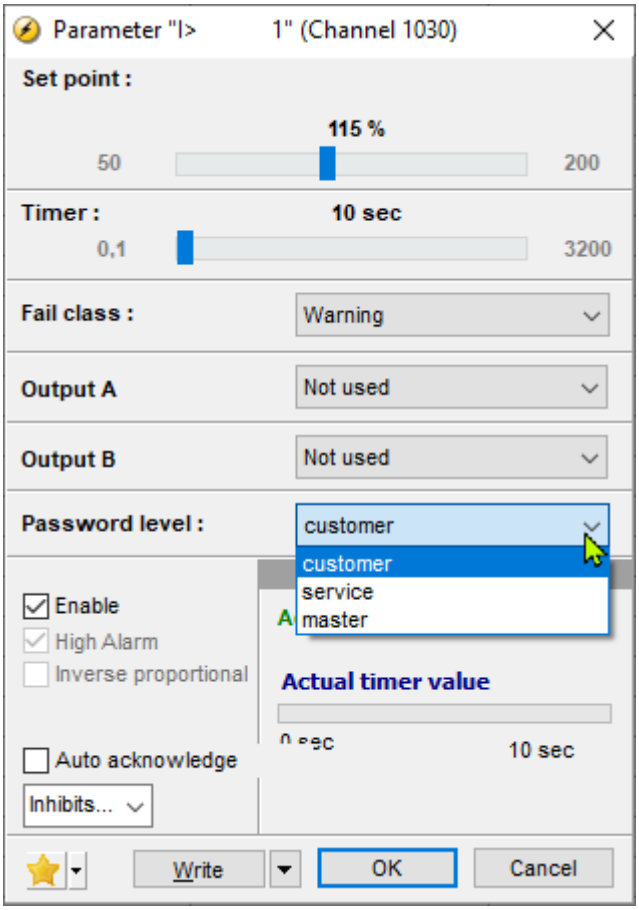
## 3.3 Password management

The controller includes three password levels. All levels can be adjusted in the PC software.

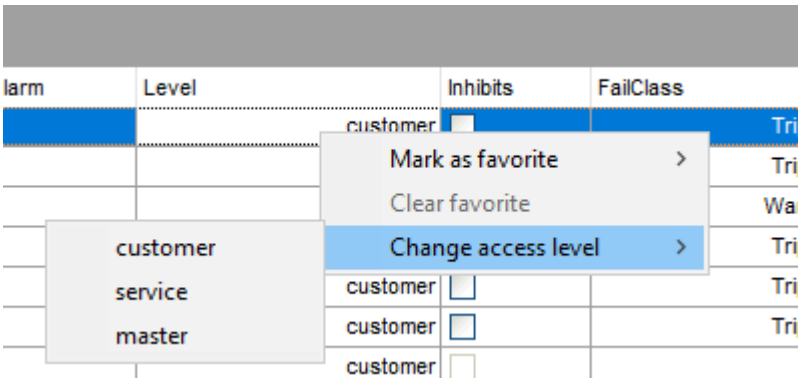
| Password level | Factory setting | Access | | |
|---|---|---|---|---|
| | | Customer | Service | Master |
| Customer | 2000 | X | | |
| Service | 2001 | X | X | |
| Master | 2002 | X | X | X |

A parameter cannot be entered with a password that is ranking too low. But the settings can be displayed without password entry.

Each parameter can be protected by a specific password level. To do so, the PC utility software must be used. Enter the parameter to be configured and select the correct password level.




The password level can also be changed from the parameter view in the column "Level". Right-click the field, select "Change access level" and then select the required password level.




### 3.3.1 Parameter access

To change parameters, the user must be logged on with the required access level (master, service or customer). If the user is not logged on at the correct access level, it is not possible to change the parameters.

**INFO**
The customer password can be changed in jump menu 9116. The service password can be changed in jump menu 9117. The master password can be changed in jump menu 9118.

**INFO**
The factory passwords must be changed if the operator is not allowed to change the parameters.

**INFO**
It is not possible to change the password for a higher level than the password entered.

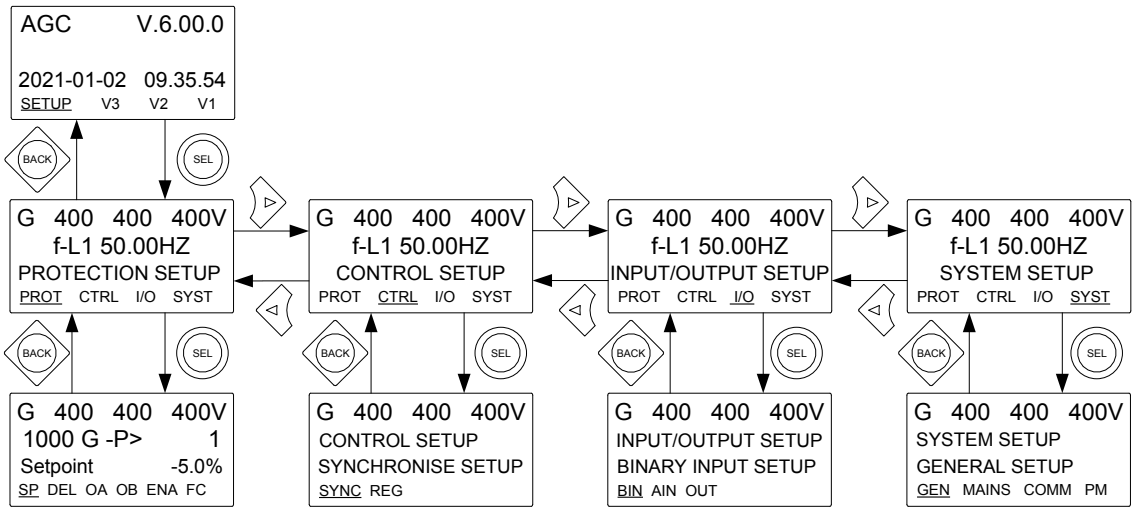
## 3.4 Setup

The setup menu system is used to configure the controller. It includes information that is not available in the view menu system. From the entry window, select SETUP in the line 4.

These are the setup sub-menus:

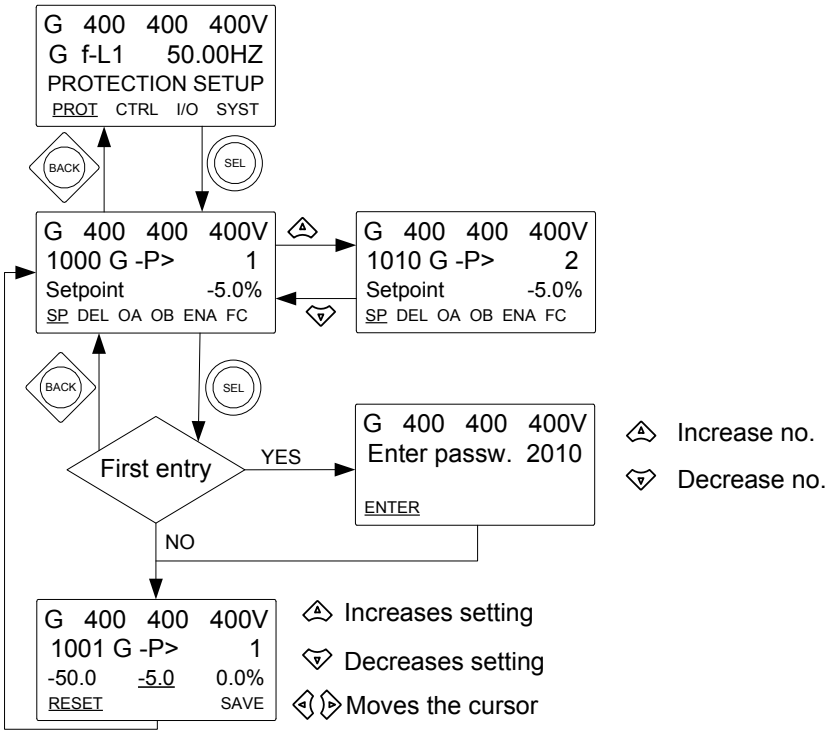
- Protection setup
- Control setup
- I/O setup
- System setup

**Setup structure**



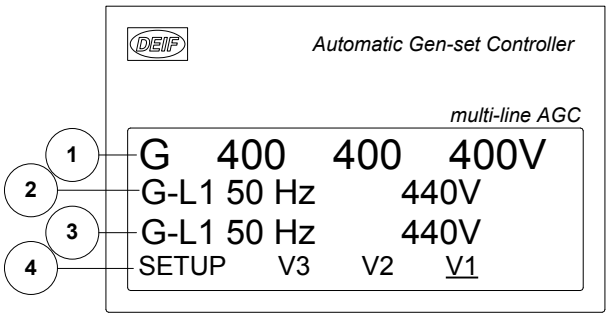
### Setup example

This example shows how a reverse power protection set point is changed.




## 3.5 Views

The view menus (V1, V2 and V3) display a variety of measured values.




1. Measurements (V1 and V2) or status (V3)
2. Measurements
3. Measurements
4. Selection of setup and view menus

### Navigation

The operator can select the view by moving the cursor (line 4) using the ◁ and ▷ buttons. The cursor is the underscore (V1 in the drawing above).

### 3.5.1 Configurable views V1 and V2

V1 and V2 consist of 20 windows to display the values selected during configuration. V1 and V2 are identical. Select the window to display using the △ and ▽ buttons.

**More information**
See the **Designer's reference handbook** for information about configuration.

## 3.5.2 Dynamic view V3

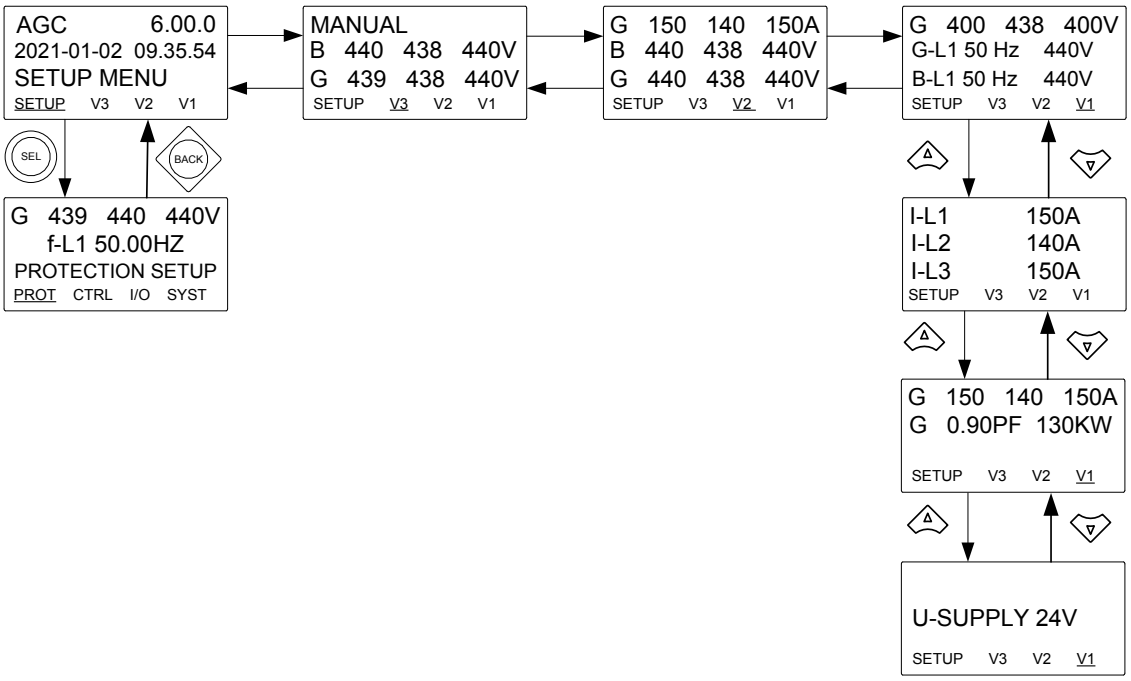
The V3 display is dynamic:

- First display line: Status text. This shows the controller running status.
- Second and third display lines: Relevant measured values.
- Fourth display line: Selection line.

**INFO**
V3 is not configurable. The information shown is determined by the running status.

## 3.5.3 View menu example

The following is an example of a configured view menu system. In this example, four of the 20 windows in view 1 are shown.



## 3.6 Status texts

| Status text | Description |
|---|---|
| ACCESS LOCK | The configurable input is activated, and the operator presses one of the blocked keys. |
| ADAPT IN PROGRESS | The AGC is receiving the application that it has just connected to. |
| AMF ACTIVE | The controller is in auto mode during a mains failure. |
| AMF AUTO | The mains controller is in auto mode and ready to respond. |
| AMF MAN | The controller is in manual mode and waiting for operator input. |
| AMF SEMI | The controller is in semi-automatic mode and waiting for operator input. |
| Applying IP config. | The IP settings have been changed, so the controller is updating the configuration (this takes about 30 seconds). |
| AUTO OPERATION | Power management, BTB controller: Controller in Auto, but not ready for breaker operation (due to an active *BTB trip* alarm). |
| Aux. test ##.#V ####s | The battery test is activated. |
| BB A BLOCKING | Due to a problem on busbar A, the BTB controller cannot close the BTB. |
| BB B BLOCKING | Due to a problem on busbar B, the BTB controller cannot close the BTB. |
| BB BLOCKED BY GB## | Power management: GB## has a position failure. |
| BB BLOCKED BY MB## | Power management: MB## has a position failure. |
| BB BLOCKED BY TB## | Power management: TB## has a position failure. |
| BLACKOUT ENABLE | Genset controller: There is a CAN failure in a power management application. |
| BLOCKED FOR CLOSING | Power management, BTB controller: Last open BTB in a ring busbar. |
| BROADCAST ABORTED | Power management: Broadcast terminated. |
| BROADCAST COMPLETED | Power management: Successful broadcast of an application. |
| BROADCASTING APPL. # | Power management: Broadcast one of the four applications from one controller to the other AGCs in the power management system, through the CAN line. |
| BTB XX DIVIDING SEC. | Power management, Genset controller: BTB XX is dividing two sections in an island application. |
| BTB TRIP EXTERNALLY | Some external equipment has tripped the breaker. An external trip is logged in the event log. |
| BTB## BLOCKED | Power management: # is replaced by A or B depending on where the problem is located. |
| BLOCK | Block mode is activated. |
| BTB RACKED OUT | The *Breaker racked out* digital input is actived. Position failure and external trip alarms from the racked out breaker will not interfere with the rest of the system. |
| XXXX Busbar blocked | Power management: Power sources cannot connect because breaker feedback is missing. |
| CBE config relay/DVC | CBE is enabled in parameter 2254, but no AVR relay or DVC 310/D510C/DVC 550 is configured. The CBE sequence will not be executed. |
| CHANGING PRIORITY | A manual priority change is being applied. |
| COMPENSATION FREQ. | Compensation is active. The frequency is not at the nominal setting |
| COOLING DOWN | Cooling down period is activated and indefinite (the cooling down timer is set to 0.0 s). |
| COOLING DOWN ###s | Cooling down period is activated. |
| DELOAD | The controller is decreasing the load of the genset in order to open the breaker. |
| DELOADING BTB XX | Genset controllers are load sharing asymmetrically to de-load BTB XX. |
| DELOADING MB XX | Genset controllers are increasing their load to de-load MB XX. |

| Status text | Description |
|---|---|
| DELOADING TB XX | Genset controllers are decreasing their load to de-load TB XX. |
| DERATED TO #####kW | Displays the ramp down set point. |
| DG BLOCKED FOR START | The generator has stopped and has active alarm(s). |
| DIVIDING SEC IN ###s | The BTB will open in ###s. |
| DIVIDING SECTION | Power management: A BTB controller is dividing two sections in an island application. |
| DRY ALTERNATOR AUTO | The mains controller is in auto mode and ready to respond. |
| DRY ALTERNATOR MAN | The controller is in manual mode and waiting for operator input. |
| DRY ALTERNATOR SEMI | The controller is in semi-automatic mode and waiting for operator input. |
| DRYING ALTERNATOR | The controller is in auto mode and drying the alternator. |
| | |
| EXTERNAL START ORDER | A planned AMF sequence is activated (without a mains failure). |
| EXT. STOP TIME ###s | |
| FIXED POWER ACTIVE | The controller is in auto mode and supplying fixed power. |
| FIXED POWER AUTO | The mains controller is in auto mode and ready to respond. |
| FIXED POWER MAN | The controller is in manual mode and waiting for operator input. |
| FIXED POWER SEMI | The controller is in semi-automatic mode and waiting for operator input. |
| FULL TEST | Test mode is activated. |
| FULL TEST ###.#min | Test mode activated and test timer counting down. |
| GB AND MB RACKED OUT | The *Breaker racked out* digital input is activated. Position failure and external trip alarms from the racked out breakers will not interfere with the rest of the system. |
| GB ON BLOCKED | The generator is running, the GB is open and there is an active *Trip GB* alarm. |
| GB RACKED OUT | The *Breaker racked out* digital input is activated. Position failure and external trip alarms from the racked out breaker will not interfere with the rest of the system. |
| GB TRIP EXTERNALLY | Some external equipment (not the controller) has tripped the breaker. An external trip is logged in the event log. |
| GENSET STOPPING | Cooling down has finished. |
| Hz/V OK IN ###s | The voltage and frequency on the genset is OK. When the timer runs out the generator breaker can be closed. |
| IDLE RUN | The *Idle run* function is active. The genset will not stop until the timer has expired. |
| IDLE RUN ###.#min | The timer in the *Idle run* function is active. |
| ISLAND ACTIVE | The controller is in auto mode and supplying power while not connected to a mains supply. |
| ISLAND AUTO | The mains controller is in auto mode and ready to respond. |
| ISLAND MAN | The controller is in manual mode and waiting for operator input. |
| ISLAND SEMI | The controller is in semi-automatic mode and waiting for operator input. |
| LOAD TAKEOVER AUTO | The mains controller is in auto mode and ready to respond. |
| LOAD TAKEOVER MAN | The controller is in manual mode and waiting for operator input. |
| LOAD TAKEOVER SEMI | The controller is in semi-automatic mode and waiting for operator input. |
| LOAD TEST | Test mode is activated. |
| LOAD TEST ###.#min | Test mode activated and test timer counting down. |
| LTO ACTIVE | The controller is in auto mode and taking over the load. |
| MAINS FAILURE | Mains failure and mains failure timer expired. |

| Status text | Description |
|---|---|
| MAINS FAILURE IN ###s | The frequency or voltage measurement is outside the limits. The timer shown is the Mains failure delay. |
| MAINS f OK DEL ####s | Mains frequency is OK after a mains failure. The timer shown is the Mains OK delay. |
| MAINS P EXPORT AUTO | The mains controller is in auto mode and ready to respond. |
| MAINS P EXPORT MAN | The controller is in manual mode and waiting for operator input. |
| MAINS P EXPORT SEMI | The controller is in semi-automatic mode and waiting for operator input. |
| MAINS U OK DEL ####s | The mains voltage is OK after a mains failure. The timer shown is the Mains OK delay. |
| MB RACKED OUT | The *Breaker racked out* digital input is activated. Position failure and external trip alarms from the racked out breaker will not interfere with the rest of the system. |
| MB TRIP EXTERNALLY | Some external equipment (not the controller) has tripped the breaker. An external trip is logged in the event log. |
| MOUNT CAN CONNECTOR | Connect the power management CAN line. |
| MPE ACTIVE | The controller is in auto mode and exporting power to the mains. |
| PEAK SHAVING ACTIVE | The controller is in auto mode and doing peak shaving. |
| PEAK SHAVING AUTO | The mains controller is in auto mode and ready to respond. |
| PEAK SHAVING MAN | The controller is in manual mode and waiting for operator input. |
| PEAK SHAVING SEMI | The controller is in semi-automatic mode and waiting for operator input. |
| PREPARING ENGINE IF | Preparing the engine interface. The EIC values are not yet available. |
| PREPARING ETHERNET | Preparing the Ethernet connection. Communication with USW or over Modbus TCP/IP is not yet possible. |
| | |
| PROGRAMMING LANGUAGE | Downloading the language file, using the PC utility software. |
| PROGRAMMING M-LOGIC | Downloading M-Logic to the controller. |
| QUICK SETUP ERROR | Quick setup of the application failed. |
| RAMP TO #####kW | The power ramp is ramping in steps. The next step that will be reached after the timer has expired is displayed. |
| RECEIVE COMPLETED | Power management: Application received successfully. |
| RECEIVE ERROR | Power management: Application is not received correctly. |
| RECEIVING APPL. # | Power management: The AGC is receiving an application. |
| READY AMF AUTO | The genset controller is in auto mode and the genset is stopped. |
| READY AUTO OPERATION | BTB controller in Auto and ready for breaker operation (no active *BTB trip* alarm). |
| READY DRY ALT. AUTO | The genset controller is in auto mode and the genset is stopped. |
| READY FIXED P AUTO | The genset controller is in auto mode and the genset is stopped. |
| READY ISLAND AUTO | The genset controller is in auto mode and the genset is stopped. |
| READY LTO AUTO | The genset controller is in auto mode and the genset is stopped. |
| READY MPE AUTO | The genset controller is in auto mode and the genset is stopped. |
| READY PEAK SHAV AUTO | The genset controller is in auto mode and the genset is stopped. |
| READY VENTIL. AUTO | The genset controller is in auto mode and the genset is stopped. |
| REDUNDANT CONTROLLER | This controller is redundant. Use the other controller for operator actions. |
| REMOVE CAN CONNECTOR | Remove the power management CAN lines. |
| Request BTB in ###s | A BTB close will be requested in ###s. |

| Status text | Description |
|---|---|
| SELECT GENSET MODE | Power management is deactivated and no other genset mode is selected. |
| SEMI OPERATION | Power management, BTB controller: BTB controller in Semi. |
| SENDING DAVR SETUP | The AGC is sending settings to the DVC. |
| SETUP COMPLETED | Successful update of the application in all AGC controllers. |
| SETUP IN PROGRESS | The new AGC is being added to the existing application. |
| SHUTDOWN OVERRIDE | The configurable input is active. |
| SIMPLE TEST | Test mode is activated. |
| SIMPLE TEST ###.#min | Test mode activated and test timer counting down. |
| START DG(s) IN ###s | The start genset set point is exceeded. |
| START PREPARE | The start prepare relay is activated. |
| START RELAY OFF | The start relay is deactivated during the start sequence. |
| START RELAY ON | The start relay is activated. |
| STOP DG(s) IN ###s | The stop genset set point is exceeded. |
| SYNCHRONISING BTB XX | Genset controller: BTB XX is synchronising. |
| SYNCHRONISING MB XX | Genset controller: MB XX is synchronising. |
| SYNCHRONISING TB XX | Genset controller: TB XX is synchronising. |
| TB AND MB RACKED OUT | The *Breaker racked out* digital input is activated. Position failure and external trip alarms from the racked out breakers will not interfere with the rest of the system. |
| TB BLOCKED BY BB | The tie breaker cannot close because of a problem on the busbar. |
| TB BLOCKED BY MB | The tie breaker cannot close because of a mains breaker problem. |
| TB RACKED OUT | The *Breaker racked out* digital input is activated. Position failure and external trip alarms from the racked out breaker will not interfere with the rest of the system. |
| TB TRIP EXTERNALLY | Some external equipment has tripped the breaker. An external trip is logged in the event log. |
| --------⟶ 00 TOO FAST | Generator running too fast during synchronising. |
| TOO SLOW<br>00⟵---------- | Generator running too slow during synchronising. |
| UNEXPECTED GB ON BB | Another generator breaker is closed on to the busbar (due to a GB position failure) while no voltage is present on the busbar. This indicates that other breakers cannot close to the busbar because of position failure on one or more GBs. |
| UNEXPECTED TB ON BB | A TB that is not expected to be closed is closed. |
| UNIT STANDBY | Power management: If a redundant mains controller is present, this message is shown on the redundant controller. |
| VENTILATION ACTIVE | The controller is in auto mode and ventilating. |
| VENTILATION AUTO | The mains controller is in auto mode and ready to respond. |
| VENTILATION MAN | The controller is in manual mode and waiting for operator input. |
| VENTILATION SEMI | The controller is in semi-automatic mode and waiting for operator input. |
| VERIFYING SC REMOVED | The GB is closed for the first time after alternator drying. |
| VOLTAGE/FREQUENCY OK | The voltage and frequency are okay, and the timer has run out. |
| WARM UP RAMP | Warm up ramp is active. The available power is limited until the pre-defined temperature is reached, or when the input that activated warm up ramp is deactivated. |

## 3.7 Alarm handling

When an alarm occurs, the display unit automatically goes to the alarm list to display the alarm.

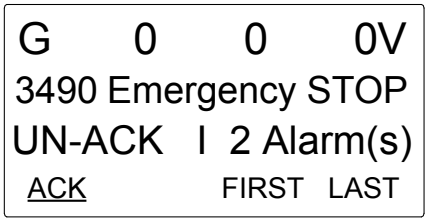
If you do not want to view the alarms, use the BACK button to exit the alarm list.

If you decide to enter the alarm list later, use the INFO button to jump directly to the alarm list.

The alarm list contains active alarms (that is, the alarm condition is still present), both acknowledged and unacknowledged. Once an alarm is acknowledged and the condition has disappeared, the alarm is no longer displayed in the alarm list.

This means that if there are no alarms, the alarm list is empty.

**DANGER!**
An alarm can block a genset start. When the alarm condition is no longer present and the alarm is acknowledged, the alarm no longer blocks the genset start. If the start conditions are still active and the controller is in AUTO, the controller automatically starts the genset and closes the breaker.




This display example shows an unacknowledged alarm. The display can show only one alarm at a time.

To see the other alarms, use the and buttons to scroll in the display.

To acknowledge an alarm, place the cursor (underscore) under "ACK" and then press SEL.

To jump to the first (oldest) or the last (most recent) alarm, place the cursor under the selection (FIRST or LAST) and press SEL.

### Understanding alarm numbers

Many alarms start with a number (for example, **3490**). This is the parameter group for the alarm. See the **Parameter list** for more information.

## 3.8 Log list

The log is divided into three different lists:

1. Events
2. Alarms
3. Battery test

The log list contains up to 150 events, the alarm list contains up to 30 historical alarms and the battery test list contains up to 52 historical battery tests.

An event is, for example, closing of breaker and starting of engine. An alarm is, for example, over-current or high cooling water temperature. A battery test is, for example, test OK or test failed.

To enter the log list:

1. Press LOG.
2. Select the list that is needed by using the  and  buttons, and press the SEL button.
3. To scroll up and down in the list, use the  and  buttons.

It is also possible to go to the first (oldest) logging or the last (most recent) logging by placing the cursor (underscore) under the selection (move the cursor using the  and  buttons) and then pressing the SEL button.

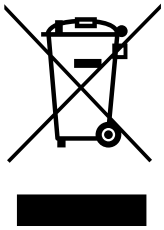
# 4. Maintenance and disposal

## 4.1 Maintenance

The AGC-4 Mk II does not require maintenance. If the controller is damaged, you can send it to DEIF for replacement of the damaged parts.

## 4.2 Disposal of waste electrical and electronic equipment

WEEE symbol



All products that are marked with the crossed-out wheeled bin (the WEEE symbol) are electrical and electronic equipment (EEE). EEE contains materials, components and substances that can be dangerous and harmful to people's health and to the environment. Waste electrical and electronic equipment (WEEE) must therefore be disposed of properly. In Europe, the disposal of WEEE is governed by the WEEE directive issued by the European Parliament. DEIF complies with this directive.

You must not dispose of WEEE as unsorted municipal waste. Instead, WEEE must be collected separately, to minimise the load on the environment, and to improve the opportunities to recycle, reuse and/or recover the WEEE. In Europe, local governments are responsible for facilities to receive WEEE. If you need more information on how to dispose of DEIF WEEE, please contact DEIF.